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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,603	02/19/2004	Robert E. Grove	2502187-991200	1625

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EXAMINER	
SHAY, DAVID M	

ART UNIT	PAPER NUMBER
3735	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/783,603	GROVE ET AL.	
	Examiner	Art Unit	
	david shay	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *January 3, 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-78* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *January 3, 2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant argues that the claims are definite, citing the portions of the specification that discuss output fluence and MPE and noting that the MPE relates to intensity of the light at the cornea. While this is noted, applicant is reminded that if the device were held up to the cornea, the output fluence would be the fluence at the cornea. It is further noted that claim 71 also relates to the "integrated radiance of the output light pulses" to be lowered to an eye safe value. It is noted that the equation at the top of page 54 of the instant specification states that the integrated radiance is equal to the source fluence divided by pi, which for the 4 J/cm^2 claimed gives a value of about 1.3 J/cm^2, which is still more than double the maximum eye safe vale calculated from applicant's disclosure.

Regarding the art rejection, applicant asserts that the references to Grove et al ('901) and O'Donnell do not provide devices that are eye safe. While the examiner notes the calculations that applicant has provided, the distance of 10 cm, which is described as the distance "for this source" is previously undisclosed and lacks antecedent basis in the specification as originally filed. The Grove et al ('901) device would have an eye safe value for a distance of 1 mile, for example, and there is no showing of the value of 1 mile as being an impermissible distance from which to determine the eye safe value "for this source". Further it is noted that the device of Grove et al ('901) is intended to abut the skin in use, thus, the examiner submits that no light will escape to the cornea, and the device of Grove et al ('901) is therefore eye safe regardless of the output fluence thereof or the distance from the eye. With respect to the combination, applicant argues that Grove et al ('901) is not eye safe, which argument has been dealt with above. Applicant also argues that there is no reason to combine the diffuser of O'Donnell with the device of Grove et al ('901). The examiner cannot agree. O'Donnell teaches that the diffuser is

used to prevent focused light from reaching the skin, while Grove et al ('901) teach the desirability of providing uniform illumination. Thus employing the diffuser of O'Donnell to render more uniform the light of Grove et al ('901) is entirely proper. Thus applicant's arguments are not convincing.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 71-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 71 requires "(d) transmitting the light pulse... [to] an operative through which eye safe light pulse are propagated having an output fluence not less than 4 J/cm^{2}" and "(e) optically diffusing the light pulse along the light path so that an integrated radiance of the output light pulse is reduced to an eye soft valve." Thus (e) requires the diffusing along the light path, which is prior to the aperture reducing the integrated radiance to an eye safe valve. This eye-safe valve is disclosed at e.g. page 9, lens 14-24 of the originally filed disclosure as being equal to $1.8x10^{-3}$ $t^{0.75}$ C_4C_6. However using the maximum disclosed valves for all the variables (t=1sec; C4=5; and C6=66.7) yields a maximum output of 0.6003 J/cm^2. Thus claims 71-77 are indefinite as they simultaneously require the output pulses to be greater than 4.0 and less than 0.6 J/cm^2. And cannot be meaningfully applied to these claims.

Claims 1, 2, 5, 8, 16-18, 20-34, and 36-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grove et al ('901) in combination with O'Donnell, Jr. Grove et al ('901) teach a device such as claimed, as set forth above, but does not teach pulse repetition rate or reflection

diffusion. O'Donnell, Jr. teaches the desirability of using a focusing diffuser lens. It would have been obvious to the artisan of ordinary skill to employ a diffuser in the device of Grove et al ('901) since this reduces the risk of concentrating the light too superficially, as taught by O'Donnell, Jr., thus producing device such as claimed.

Claims 45-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grove et al ('901) in combination with O'Donnell, Jr. and Grove et al ('403). Grove et al ('901) combined with O'Donnell, Jr. teach a device such as claimed, as set forth above, but does not teach pulse repetition rate or reflection diffusion. Grove et al ('403) teach the desirability of using pulse rate in the claimed range. It would have been obvious to the artisan of ordinary skill to employ the pulse rate of Grove et al ('403) in the device of Grove et al ('901) since this provided beneficial medical treatments as taught by Grove et al ('403) and to employ a reflective diffuser rather than the diffractive diffuser of Grove et al ('901) since there are notorious equivalents in the art, official notice of which has already been taken and provide no unexpected results, thus producing device such as claimed.

Claims 3, 4, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grove et al ('901) in combination with O'Donnell, Jr. and Rosow et al. Grove et al ('901) combined with O'Donnell, Jr. provide the teaching set forth above. Rosow et al teach the use of opal glass as a diffuser. It would have been obvious to the artisan of ordinary skill to employ opal glass as taught by Rosow et al in the device of Grove et al (901), since this would help provide more uniform illumination and would be easier to fabricate than a precision lens let array, this producing a device such as claimed.

Claims 6, 7, 9, 10, 19, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grove et al (901) in combination with O'Donnell, Jr. and McDaniel. Grove et al (901) in combination with O'Donnell, Jr. provide the teaching set forth above. McDaniel teaches the use of a holographic diffuser and the equivalence of LEDs and flashlamps. It would have been obvious to the artisan skill to employ a flashlamp in the device of Grove et al (901) since these are equivalents, as taught by McDaniel and to employ a holographic diffuser, since this would provide more evenly distributed light, or to employ the parameters of Grove et al (901) in the device of McDaniel, since the device of McDaniel intends to provide a variety of treatment and in either case to employ a Fresnel type diffuser since this is a notorious diffuser configuration, official notice of which is hereby taken, thus producing a device such as claimed.

Applicant's arguments filed *** have been fully considered but they are not persuasive. The arguments are not persuasive for the reasons set forth above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Applicant's arguments with respect to claims 1-78 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to david shay whose telephone number is (571) 272-4773. The examiner can normally be reached on Tuesday through Friday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco, can be reached on Monday through Friday. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330